

A REVISION OF THE FUR MITES MYOBIIDAE (ACARINA).

(Suite)

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Genus **AMORPHACARUS** Ewing, 1938.

Amorphacarus elongata (Poppe, 1896).

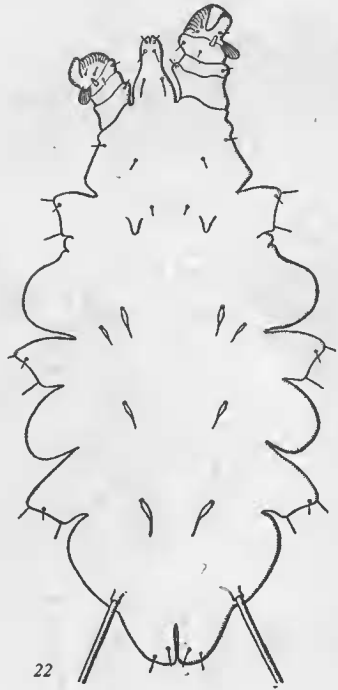
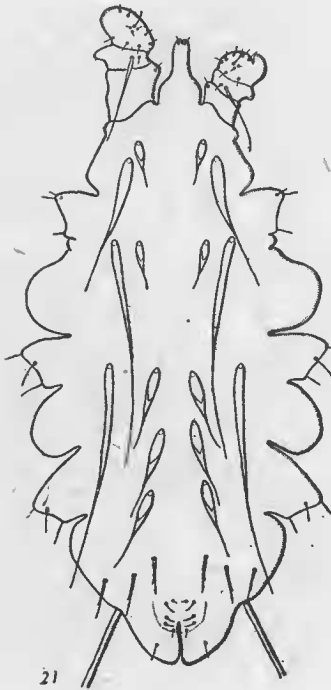
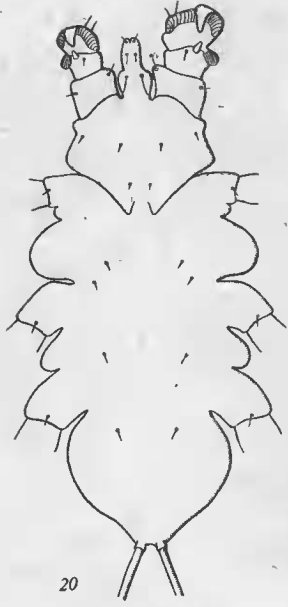
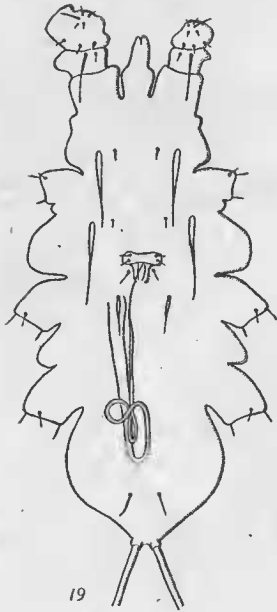
Myobia elongata Poppe, 1896. *Zool. Anz.* 19 : 509, 344.

Amorphacarus elongata (Poppe, 1896). Ewing, 1938, *Proc. ent. Soc. Wash.* 40 : 7, 192.

The male dorsum (fig. 19) has lateral spines I broad at base, placed anterior to coxae II ; lateral spines II posterior to coxae II ; lateral spines III short, stout, lying posterior to genital pore. Sub-median spines I slightly anterior to, and lying between lateral spines I ; sub-median spines II lying between and slightly anterior to lateral spines II ; lateral spines IV placed anterior to terminal bristles. Genital pore placed anterior to the level of coxae III, flanked by three pairs of small spines. Penis extending from genital pore and directed backwards towards posterior end of body, where it then bends back upon itself twice, its distal end lying close to the pore. This peculiarly whip-like penis is characteristic of the species.

The male venter (fig. 20) has three pairs of spines anterior to coxae II ; slightly anterior to coxae III are two pairs of small spines ; midway between coxae III and IV is a pair of spines ; posterior to coxae IV is a pair of spines. Legs I unequal in size, asymmetrical ; tarsus II, III and IV each with one claw.

The female dorsum (fig. 21) has lateral spines I broad at base, situated between coxae I and II ; lateral spines II placed posterior to coxae II, extending to level of coxae IV ; lateral spines III level with coxae III, of equal length to preceding pair ; lateral spines IV forming the innermost pair of a line of six spines which are placed anterior to the genital pore. Sub-median spines I lying between and anterior to lateral spines I, short, broad, two jointed ; level with and between lateral spines II are sub-median spines II ; sub-median spines III level with, and between lateral spines III, sub-similar to preceding pair but longer ; sub-median spines IV and V posterior to lateral spines III. Surrounding the genital pore are four pairs of spines. Flanking the anus is a pair of spines.



Amorphacarus elongata (Poppe, 1896).

FIG. 19, ♂ dorsum. — FIG. 20, ♂ venter. — FIG. 21, ♀ dorsum. — FIG. 22, ♀ venter.

The female venter (fig. 22) has, in addition to two pairs of small spines anterior to eoxae II, a third pair of spines between coxae II and a pair of cone-shaped chitinized processes. Anterior to eoxae III are two pairs of spines, the median pair being the stouter. A pair of stout spines lying between eoxae III and IV; level with posterior edge of eoxae IV is a pair of stout spines, longer than the others. Flanking the anus are two pairs of long, slender spines. On the capitulum are three pairs of spines. Legs I unequal, left leg much stouter and longer than the right leg. Tarsus II with two unequal claws; tarsus III and IV each with one claw.

Type host: A shrew (*Sorex araneus* L.) Also taken (Ewing, 1938, p. 193) on *Sorex cinereus cinereus* at Chimney Pond, Mt. Katahdin, Maine, August 27, 1927.

Type locality: ? Common on type host throughout its range.

Measurements: ♂ 0,35 mm. × 0,15 mm.; ♀ 0,38 mm. × 0,17 mm.

Genus **PROTOMYOBIA** Ewing, 1938.

Protomyobia claparedei (Poppe, 1896).

Myobia claparedei Poppe, 1896. *Zool. Anz.* **19**: 509, 342.

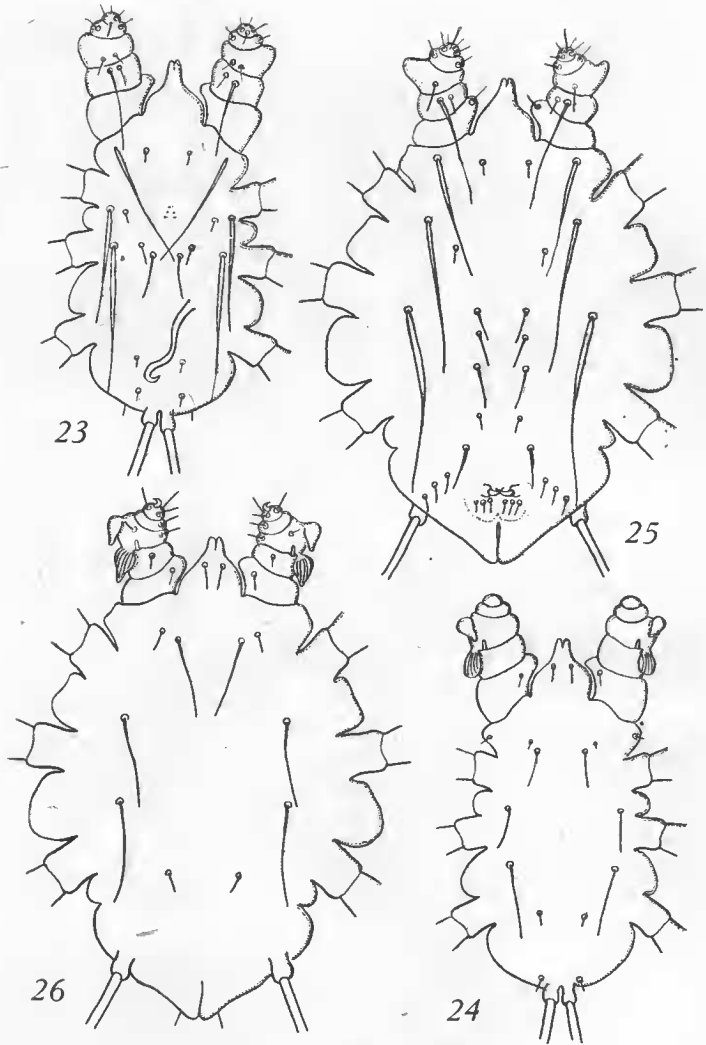
Protomyobia claparedei (Poppe, 1896). Ewing, 1938. *Proc. ent. Soc. Wash.* **40**: 7, 183.

The male dorsum (fig. 23) shows the unusual development of the legs I which prompted Ewing to establish the monotypical genus.

Lateral spines I placed close to eoxae I, long, stout, extending to eoxae III; lateral spines II close to posterior edge of coxae II, slightly expanded and extending to eoxae IV; lateral spines III level with coxae III, slightly longer than lateral spines I, sub-similar to lateral spines II in shape. Sub-median spines I short, simple, almost level with lateral spines I; sub-median spines II short, simple, nearly level with lateral spines II. Median spines I short, level with eoxae III; median spines II twice as long as preceding pair, level with lateral spines III. Posterior to eoxae IV are three pairs of short, simple spines medially as figured. The penis is short, stout and sinuous.

The male venter (fig. 24) has three pairs of spines anterior to coxae II, the third (medial) pair being the longest. Between eoxae II and III is a pair of long, slender spines; level with coxae IV is a pair of short spines; flanking the terminal bristles laterally is a pair of small spines. Tarsus II with two claws; tarsus III and IV each with one claw.

The female dorsum (fig. 25) has lateral spines I broad at base, placed close to eoxae I, tapering; lateral spines II close to posterior



Protomyobia claparedei (Poppe, 1896).
FIG. 23, ♂ dorsum. — FIG. 24, ♂ venter. — FIG. 25, ♀ dorsum. — FIG. 26, ♀ venter.

edge of coxae II, sub-similar to lateral spines I, but longer; lateral spines III stouter than I or II, level with posterior edge of coxae III and extending to base of terminal bristles. Sub-median spines I short, simple, level with lateral spines I; sub-median spines II

short, simple, posterior to level of lateral spines II. Median spines I level with lateral spines III; median spines II, III and IV posterior to lateral spines III, the fourth pair being the shortest. Posterior to coxae IV is a pair of stout spines medially; there is then three pairs of short, simple spines arranged in two diverging rows. Posterior to the pair of genital claws is a row of six short, simple spines.

The female venter (fig. 26) has a pair of long spines medially, level with anterior edge of coxae II, flanked on the outside by a pair of shorter spines; anterior to coxae II is a pair of long spines; midway between coxae III and IV is a pair of similar spines; level with posterior edge of coxae IV is a pair of spines medially. On tarsus II is a long and a short claw, with a small tooth on the inner side of the short claw; tarsus III and IV each with one claw.

Type host: Shrew (*Sorex araneus* L.). EWING (1938, p. 184) also records this species being taken from the shrews *Blarina brevicauda* and *Sorex fumeus* also the little short-tailed shrew in the U. S. A.

Type locality: ? Common on the type host throughout its range.

Measurements: ♂ 0,26 mm. × 0,16 mm.; ♀ 0,35 mm. × 0,23 mm.

Genus **RADFORDIA** Ewing, 1938.

Radfordia ensifera (Poppe, 1896).

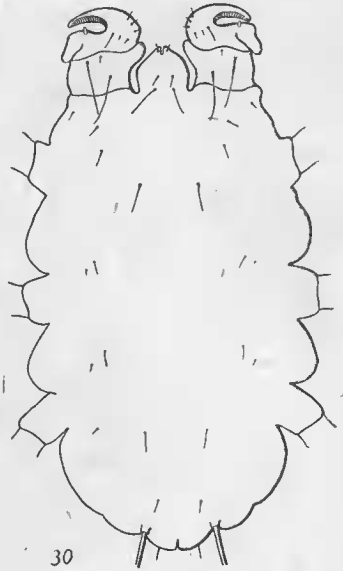
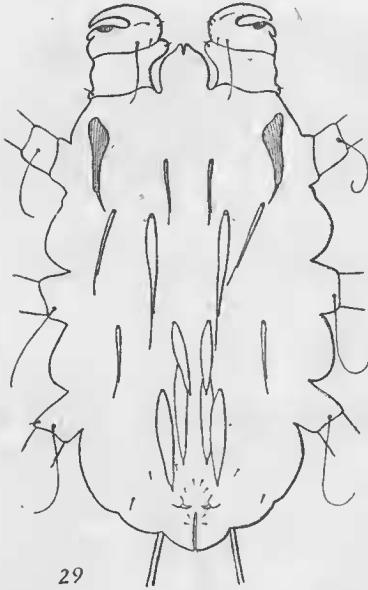
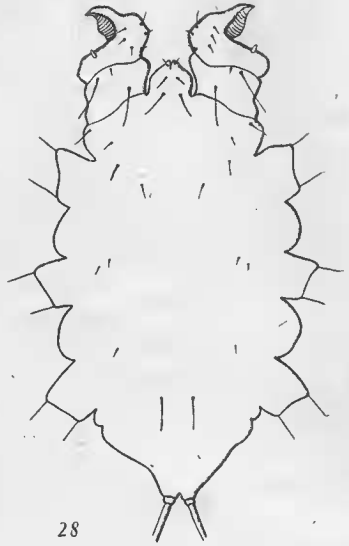
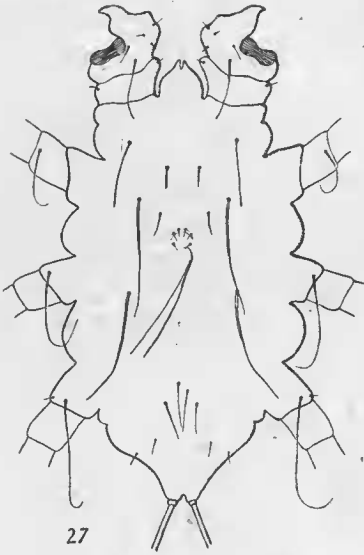
Myobia ensifera Poppe, 1896. *Zool. Anz.* **19**: 509, 344.

Myobia ratti Skidmore. *Can. ent.* **66**: 112.

Radfordia ensifera (Poppe, 1896). Ewing, 1938. *Proc. ent. Soc. Wash.* **40**: 7, 188.

The male dorsum (fig. 27) has the spines simple, not expanded, two-jointed or barbed as in *Myobia muris-musculi*. Lateral spines I midway between coxae I and II, reaching beyond posterior edge of coxae II; lateral spines II almost twice the length of preceding spines, level with posterior edge of coxae II, reaching posterior edge of coxae III; lateral spines III level with coxae III, reaching posterior edge of coxae IV. Sub-median spines I level with coxae II, short, simple; sub-median spines II posterior to bases of lateral spines II; sub-median spines III level with posterior edge of coxae IV, flanked by median spines I. Flanking these four spines, and placed nearer the lateral edge of the body are two pairs of short spines. Genital pore placed anterior to coxae III with a semi-circular row of six short spines. Penis, stout at base, extending from midway between coxae III and IV reaching forward to the genital pore.

The male venter (fig. 28) has two pairs of short spines anterior to coxae II; third and fourth pairs of spines between coxae II; two pairs of short spines level with coxae III; slightly anterior to



Radfordia ensifera (Poppe, 1896).
FIG. 27, ♂ dorsum. — FIG. 28, ♂ venter. — FIG. 29, ♀ dorsum. — FIG. 30, ♀ venter.

coxae IV there is a pair of small spines ; level with coxae IV is a pair of long spines. Three pairs of spines are borne on the capitulum. Tarsus II with a pair of equal, short, stout claws ; tarsus III and IV each with a long claw.

The female dorsum (fig. 29) has lateral spines two-jointed, broad at base, striated ; lateral spines II long, barbed, not expanded, placed posterior to coxae II, reaching to level of coxae III ; lateral spines III barbed, level with posterior edge of coxae III. Submedian spines I barbed, short, level with middle of coxae II ; submedian spines II twice as long as preceding pair, barbed, stouter, placed posterior to coxae II, extending to midway between coxae III and IV ; submedian spines III broad, peg-like, two-jointed, level with posterior edge of coxae II, extending to coxae IV ; submedian spines IV and V sub-equal, long, stout, peg-like, two-jointed. Anterior to the genital pore are two rows, each four of small spines ; flanking the pore is the pair of genital claws. Two pairs of small spines flank the anus and a pair of small spines are level with the genital claws at the lateral edge of the body.

The female venter (fig. 30) has three pairs of spines on the capitulum. Two pairs of short spines anterior to coxae II with a third pair of spines lying between coxae II ; posterior to coxae II is a pair of longer spines ; anterior to coxae III are two pairs of spines, the lateral pair being the smaller. Two pairs of spines lie between coxae III and IV ; level with posterior edge of coxae IV is a pair of small spines, flanked medially by a pair of longer spines. Anterior to the terminal bristles is a pair of spines ; on the posterior edge of the body there is a pair of spines. Tarsus II with two short, stout claws ; tarsus III and IV each with one claw.

Type host : *Rattus rattus rattus* L. Also taken on the brown rat *Rattus norvegicus norvegicus* Berkenhout by several authors. Taken by the present author on the Ceylon house rat (*Rattus rattus kandyianus* Kelaart) at Embilipitiya, Ceylon, may 28, 1944 ; and on the rat *Rattus rattus rufescens* Gray) at Imphal, Manipur State, India may 6, 1945. Poppe (1896, p. 342) reports that TROUËSSART found this species on the white rat (*Rattus rattus albino*) in the Ecole veterinaire, d'Alfort.

Type locality : ? Common on *Rattus* ssp. throughout the world.

Measurements : ♂ 0,27 mm. × 0,17 mm. ; ♀ 0,34 mm. × 0,22 mm.